

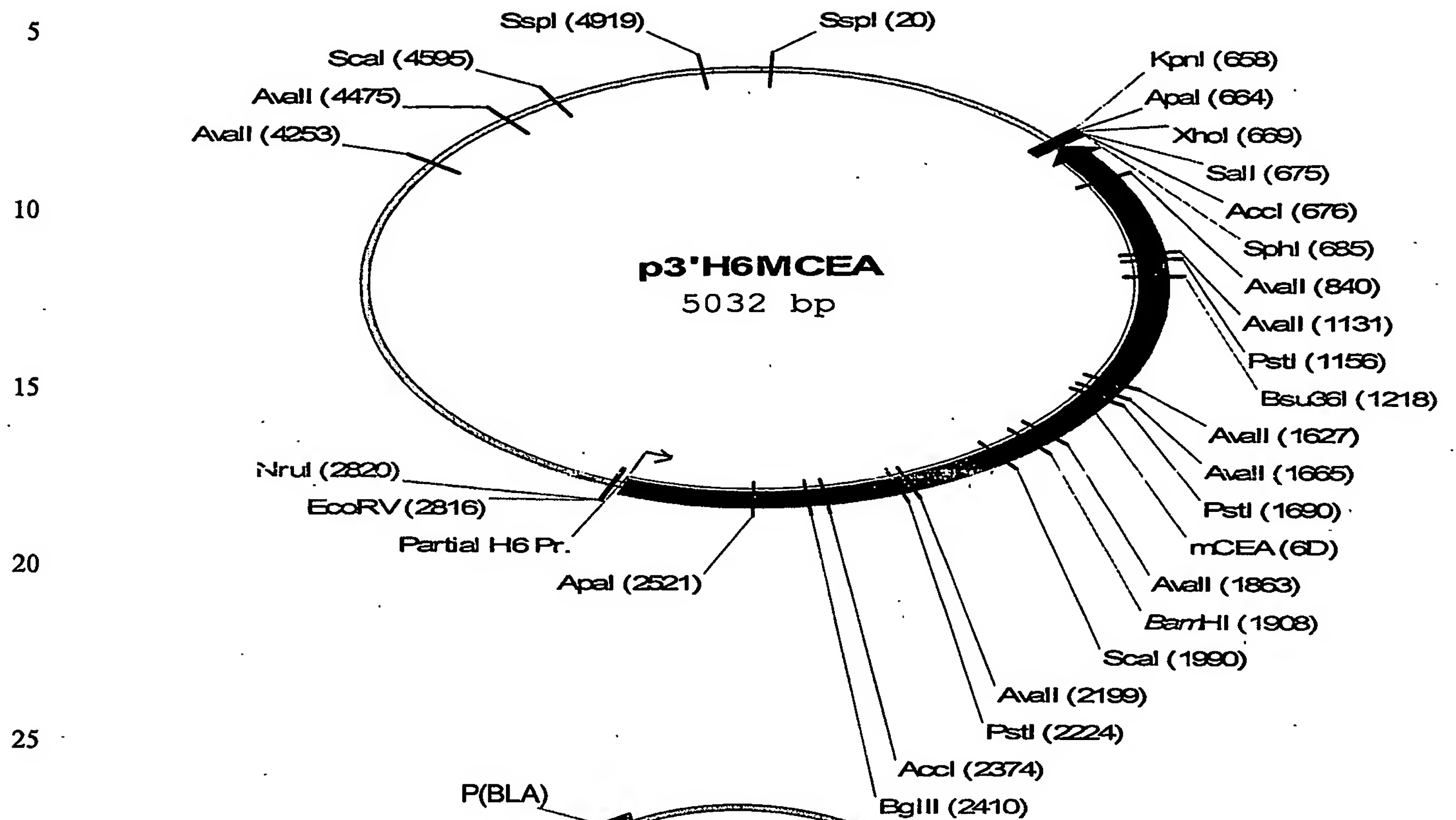
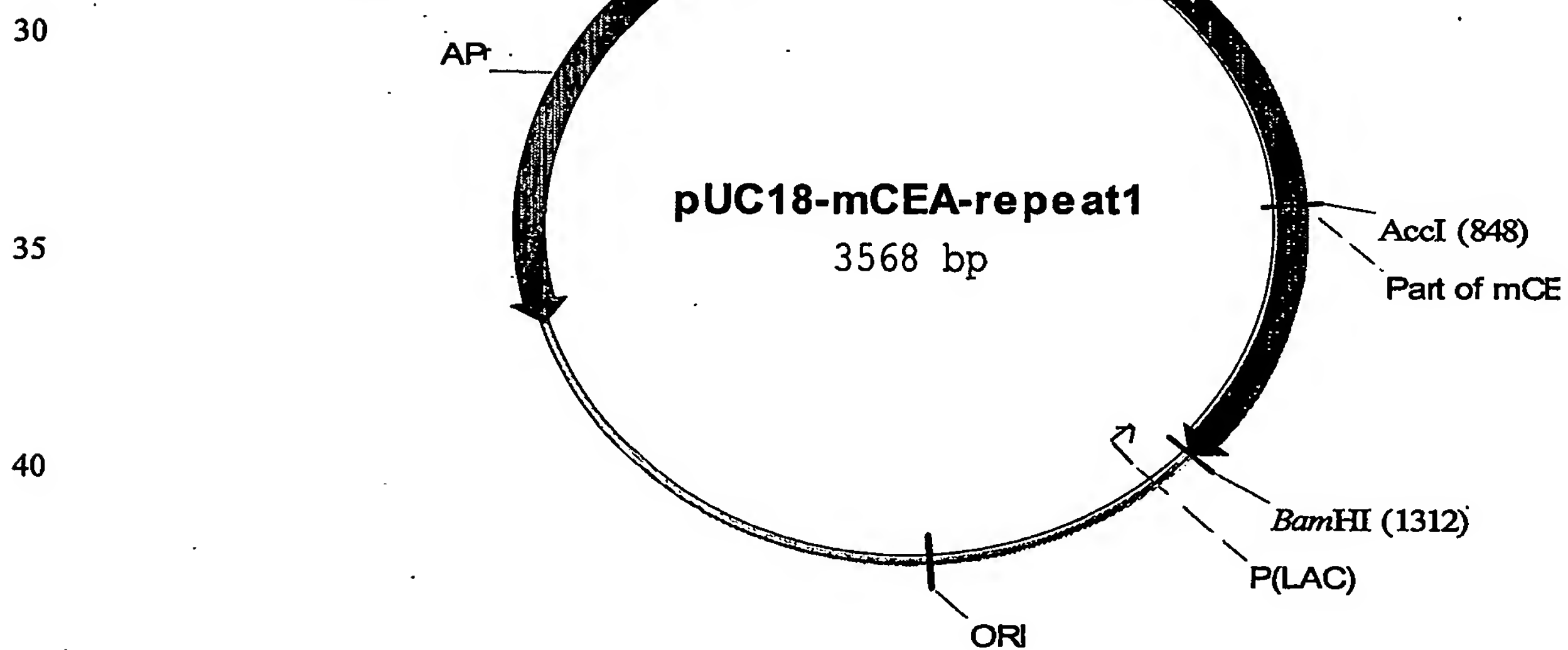
FIGURE 1**A.****B.**

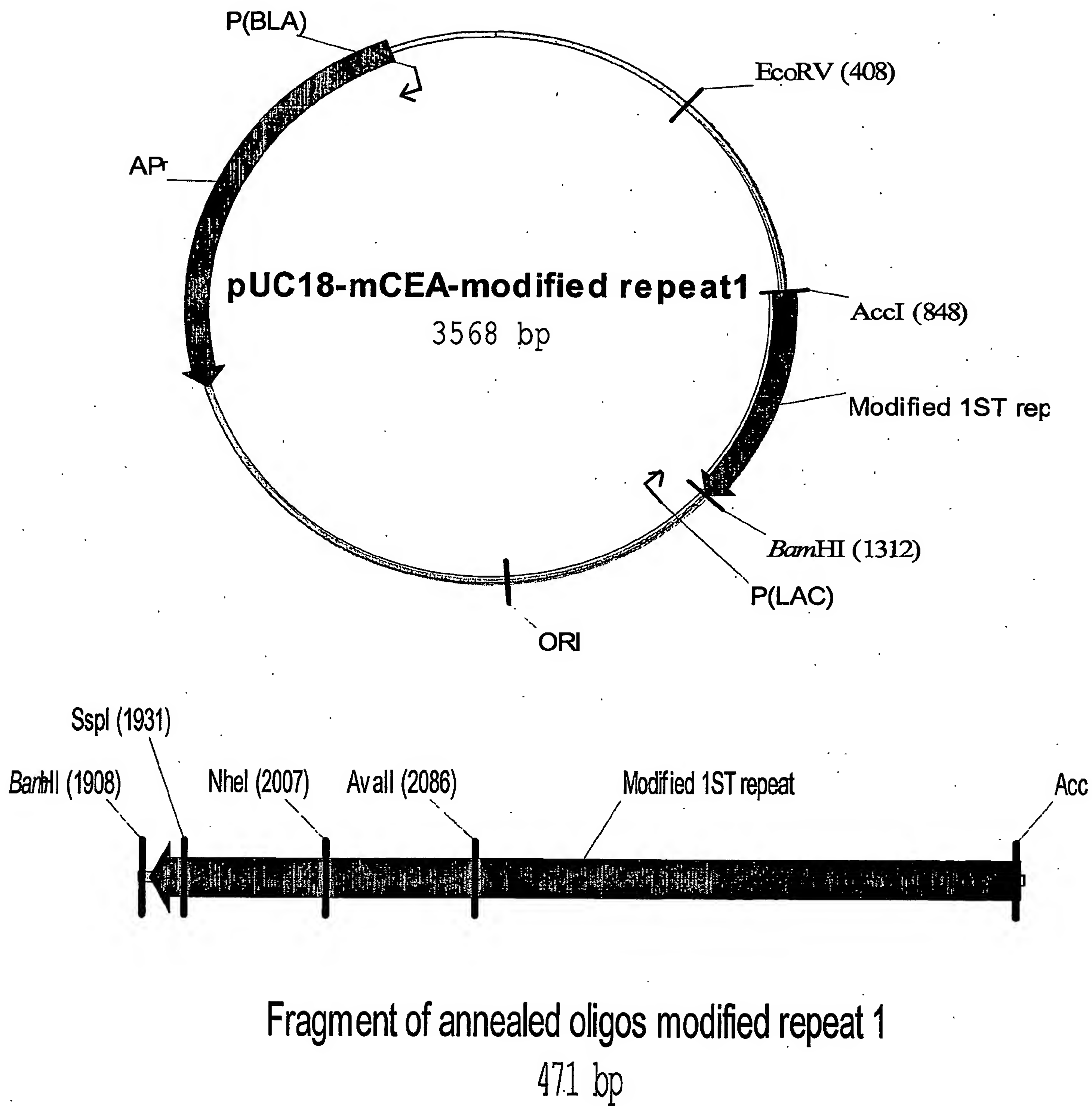
FIGURE 2

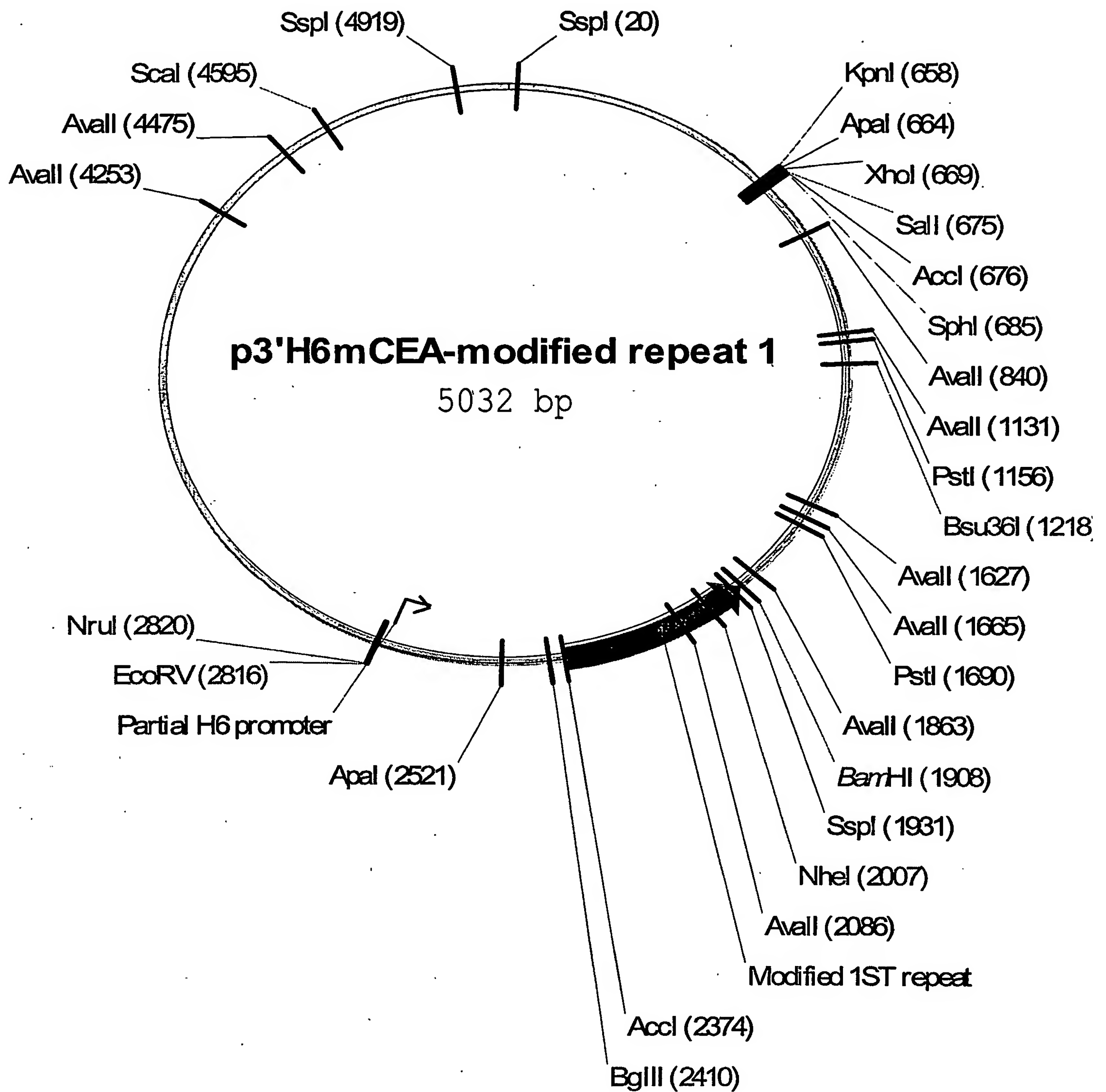
FIGURE 3

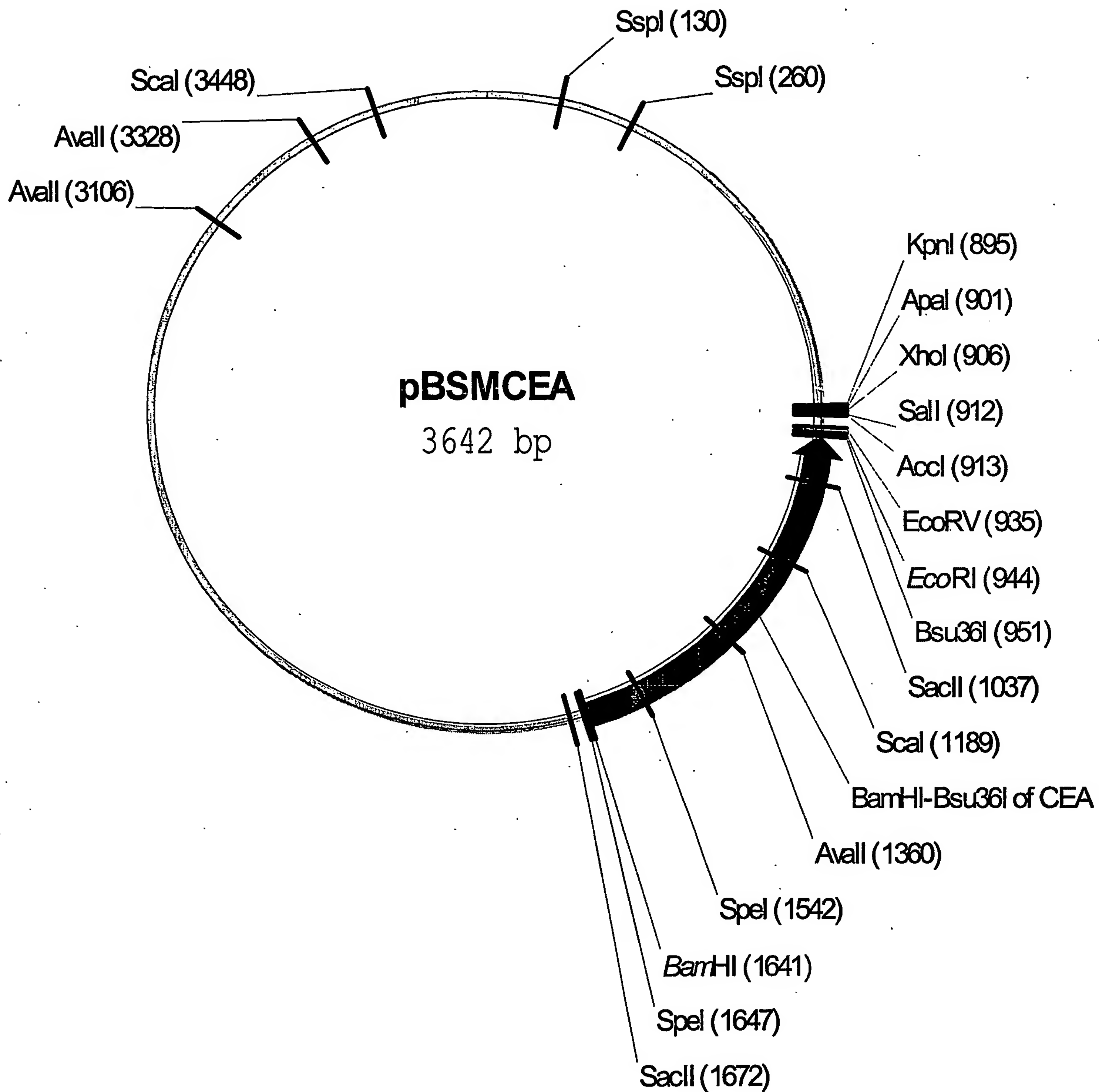
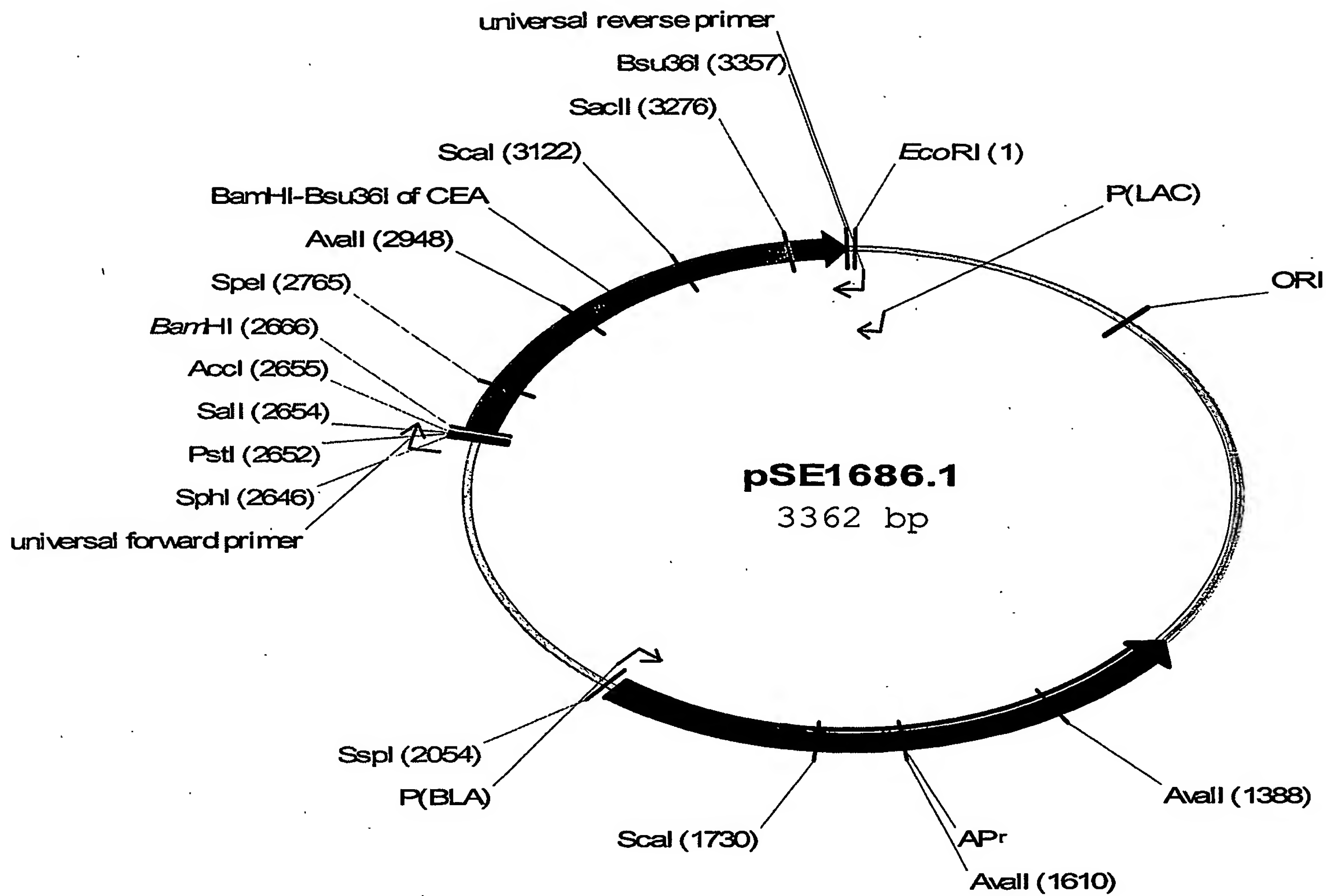
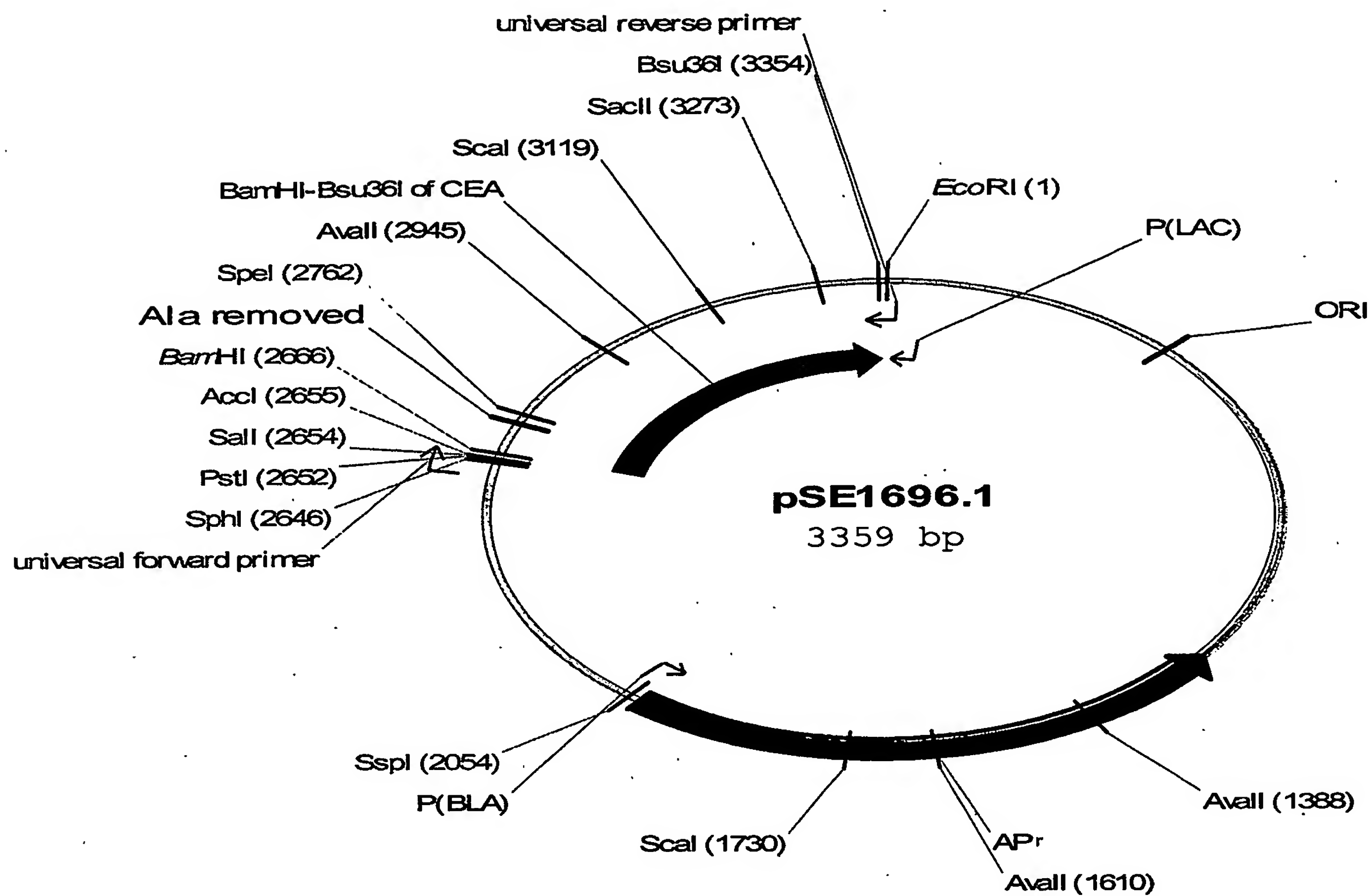
FIGURE 4

FIGURE 5

pUC18 mCEA modified repeat 2 (gsoe)

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FIGURE 6

pUC18 mCEA modified repeat 2 gsoe minus Ala

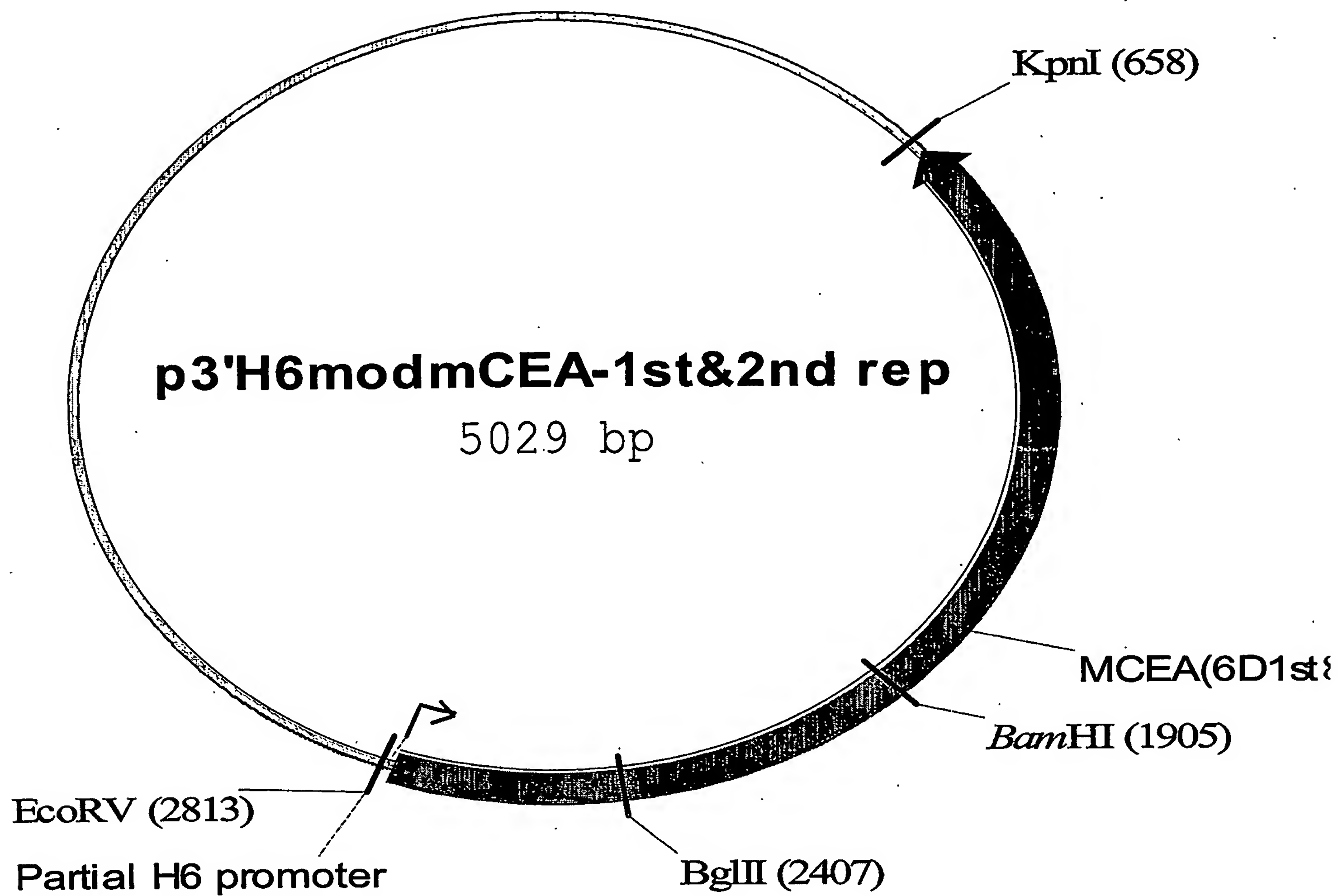
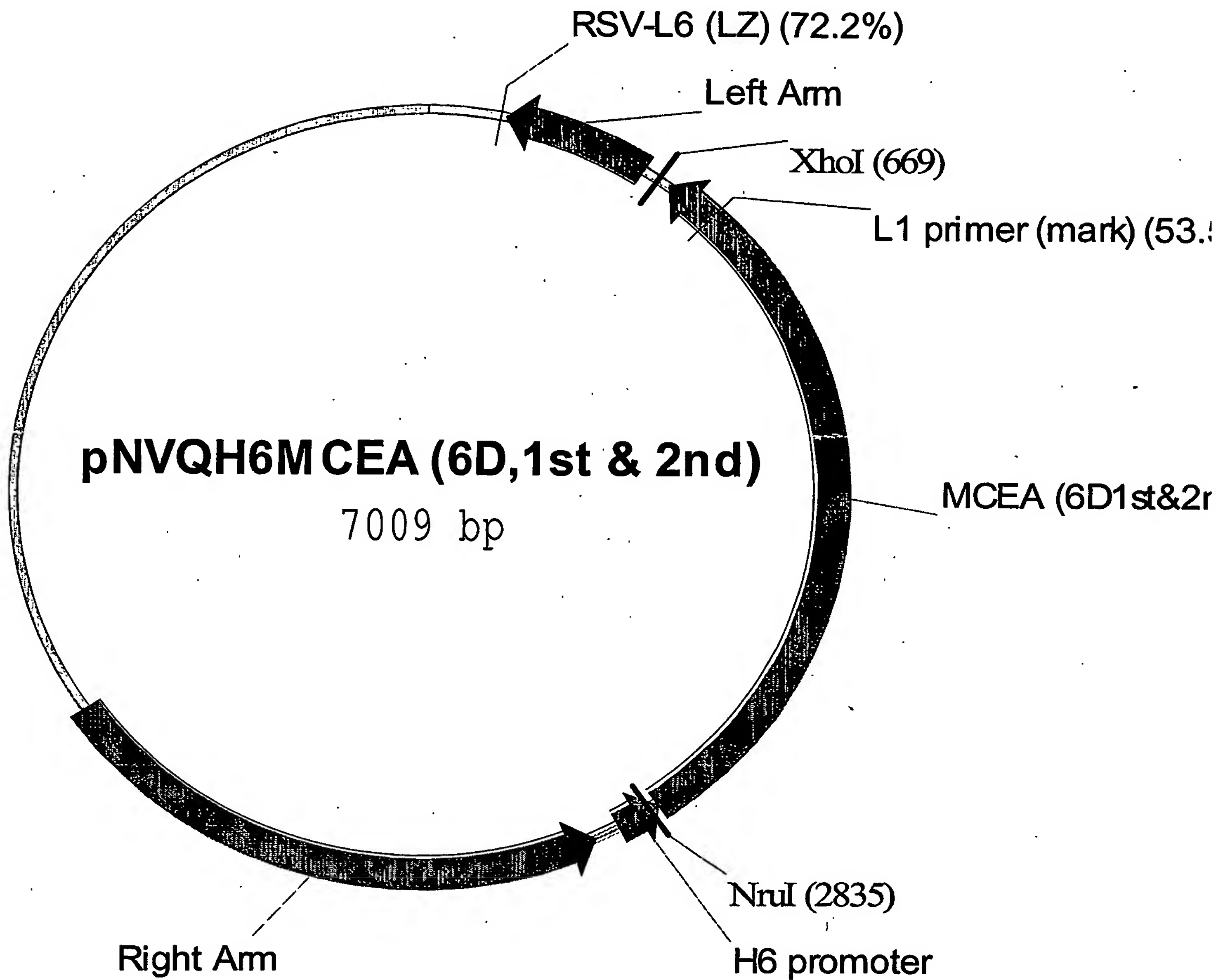
FIGURE 7

FIGURE 8



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FIGURE 9A

5	mCEA (6D)	1	50
	mCEA (6D, 1st&2nd)	ATGGAGTCTC CCTCGGCCCC TCCCCACAGA TGGTGCATCC CCTGGCAGAG	
10	mCEA (6D)	51	100
	mCEA (6D, 1st&2nd)	GTCCTGCTC ACAGCCTCAC TTCTAACCTT CTGGAACCCG CCCACCACTG	
15	mCEA (6D)	101	150
	mCEA (6D, 1st&2nd)	CCAAGCTCAC TATTGAATCC ACGCCGTTCA ATGTCGCAGA GGGGAAGGAG	
20	mCEA (6D)	151	200
	mCEA (6D, 1st&2nd)	GTGCTTCTAC TTGTCCACAA TCTGCCCCAG CATCTTTTGT GCTACAGCTG	
25	mCEA (6D)	201	250
	mCEA (6D, 1st&2nd)	GTACAAAGGT GAAAGAGTGG ATGGCAACCG TCAAATTATA GGATATGTAA	
30	mCEA (6D)	251	300
	mCEA (6D, 1st&2nd)	TAGGAACTCA ACAAGCTACC CCAGGGCCCCG CATACTTTTG TCGAGAGATA	
35	mCEA (6D)	301	350
	mCEA (6D, 1st&2nd)	ATATACCCCA ATGCATCCCT GCTGATCCAG AACATCATCC AGAATGACAC	
40	mCEA (6D)	351	400
	mCEA (6D, 1st&2nd)	AGGATTCTAC ACCCTACACG TCATAAAGTC AGATCTTGTG AATGAAGAAG	
45	mCEA (6D)	401	450
	mCEA (6D, 1st&2nd)	CAACTGGCCA GTTCCGGGTA TACCCGGAGC TGCCCAAGCC CTCCATCTCC	
50	mCEA (6D)	451	500
	mCEA (6D, 1st&2nd)	AGCAACAAC TCAAATAATA CCAAACCCGT GGAGGACAAG GATGCTGTGG CCTTCACCTG	
55	mCEA (6D)	501	550
	mCEA (6D, 1st&2nd)	TGAACCTGAG ACTCAGGACG CAACCTACCT GTGGTGGGTA AACCAATCAGA	
60	mCEA (6D)	551	600
	mCEA (6D, 1st&2nd)	CGAGCCCGAA ACTCAAGACG CAACATATCT CTGGTGGGTG AACCAACCAGT	
65	mCEA (6D)	601	650
	mCEA (6D, 1st&2nd)	GCCTCCCGGT CAGTCCCAGG CTGCAGCTGT CCAATGGCAA CAGGACCCTC	
70	mCEA (6D)	651	700
	mCEA (6D, 1st&2nd)	CCCTGCCTGT GTCCCTTAGA CTCCAACCTCA GCAACGGAAA TAGAACTCTG	
75	mCEA (6D)	701	750
	mCEA (6D, 1st&2nd)	ACTCTATTCA ATGTCACAAG AAATGACACA GCAAGCTACA AATGTGAAAC	
80	mCEA (6D)	751	800
	mCEA (6D, 1st&2nd)	ACCCTGTTTA ACGTGACCAG GAACGACACA GCAAGCTACA AATGCGAAAC	

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FIGURE 9B

		651				700
	mCEA (6D)	CCAGAACCCA	GTGAGTGCCA	GGCGCAGTGA	TTCAGTCATC	CTGAATGTCC
5	mCEA (6D, 1st&2nd)	CCAA <u>AAT</u> CCA	GT <u>CAG</u> C <u>G</u> CCA	GGAGG <u>T</u> CTGA	TTCAGT <u>G</u> ATT	CT <u>CA</u> AC <u>G</u> T <u>G</u> C
		701				750
	mCEA (6D)	TCTATGGCCC	GGATGCCCCC	ACCATTTC	CTCTAAACAC	ATCTTACAGA
	mCEA (6D, 1st&2nd)	T <u>T</u> TACGG <u>A</u> CC	CGATGCTCCT	ACAATCAGCC	CTCTAAACAC	AAGCTATAGA
10		751				800
	mCEA (6D)	TCAGGGGAAA	ATCTGAACCT	CTCCTGCCAC	GCAGCCTCTA	ACCCACCTGC
	mCEA (6D, 1st&2nd)	TCAGGGGAAA	ATCTGAATCT	GAGCTGT <u>CAT</u>	GCCGCTAGCA	ATCCTCCCGC
15		801				850
	mCEA (6D)	ACAGTACTCT	TGGTTTGTCA	ATGGGACTTT	CCAGCAATCC	ACCCAAGAGC
	mCEA (6D, 1st&2nd)	CCAATACAGC	TGGTTTGTCA	ATGGC <u>ACT</u> TT	CCAACAGTCC	ACCCAGGAAC
20		851				900
	mCEA (6D)	TCTTTATCCC	CAACATCACT	GTGAATAATA	GTGGATCCTA	TACGTGCCAA
	mCEA (6D, 1st&2nd)	TGTT <u>CAT</u> TCC	CAATATTACC	GTGAACAATA	GTGGATCCTA	CACGTGCCAA
25		901				950
	mCEA (6D)	GCCCATAACT	CAGACACTGG	CCTCAATAGG	ACCACAGTCA	CGACGATCAC
	mCEA (6D, 1st&2nd)	GCTCACAATA	GCGACACCGG	ACTCAACCGC	ACAACCGTGA	CGACGATTAC
30		951				1000
	mCEA (6D)	AGTCTATGAG	CCACCCAAAC	CCTTCATCAC	CAGCAACAAC	TCCAACCCCG
	mCEA (6D, 1st&2nd)	CGTGTATGAG	CCACCAAAAC	CATTCATAAC	TAGTAACAAT	TCTAACCAG
35		1001				1050
	mCEA (6D)	TGGAGGATGA	GGATGCTGTA	GCCTTAACCT	GTGAACCTGA	GATTCAGAAC
	mCEA (6D, 1st&2nd)	TTGAGGATGA	GGACGCAGTT	GCATTAACCT	GTGAGCCAGA	GATTCAAAAT
40		1051				1100
	mCEA (6D)	ACAACCTACC	TGTGGTGGGT	AAATAATCAG	AGCCTCCCGG	TCAGTCCCAG
	mCEA (6D, 1st&2nd)	ACC <u>ACT</u> TAT	TATGGTGGGT	CAATAACCA	AGTTTGCCGG	TTAGCCACG
45		1101				1150
	mCEA (6D)	GCTGCAGCTG	TCCAATGACA	ACAGGACCCT	CACTCTACTC	AGTGTACAA
	mCEA (6D, 1st&2nd)	C <u>TT</u> GCA <u>G</u> TTG	TCTAATGATA	ACCGCACATT	GACACTCCTG	TCCGTTACTC
50		1151				1200
	mCEA (6D)	GGAATGATGT	AGGACCCTAT	GAGTGTGGAA	TCCAGAACGA	ATTAAGTGTT
	mCEA (6D, 1st&2nd)	GCAATGATGT	AGGACCTTAT	GAGTGTGGCA	TTCAGAATGA	ATTATCCGTT
		1201				1250
	mCEA (6D)	GACCACAGCG	ACCCAGTCAT	CCTGAATGTC	CTCTATGGCC	CAGACGACCC
	mCEA (6D, 1st&2nd)	GATCACTCCG	ACCCTGTTAT	CCTTAATGTT	TTGTATGGCC	CAGACGACCC
		1251				1300
	mCEA (6D)	CACCATTTC	CCCTCATACA	CCTATTACCG	TCCAGGGGTG	AACCTCAGCC
	mCEA (6D, 1st&2nd)	A <u>ACT</u> TATCT	CCATCATACA	CCTACTACCG	TCCCGGCGTG	AACCTGAGCC

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FIGURE 9C

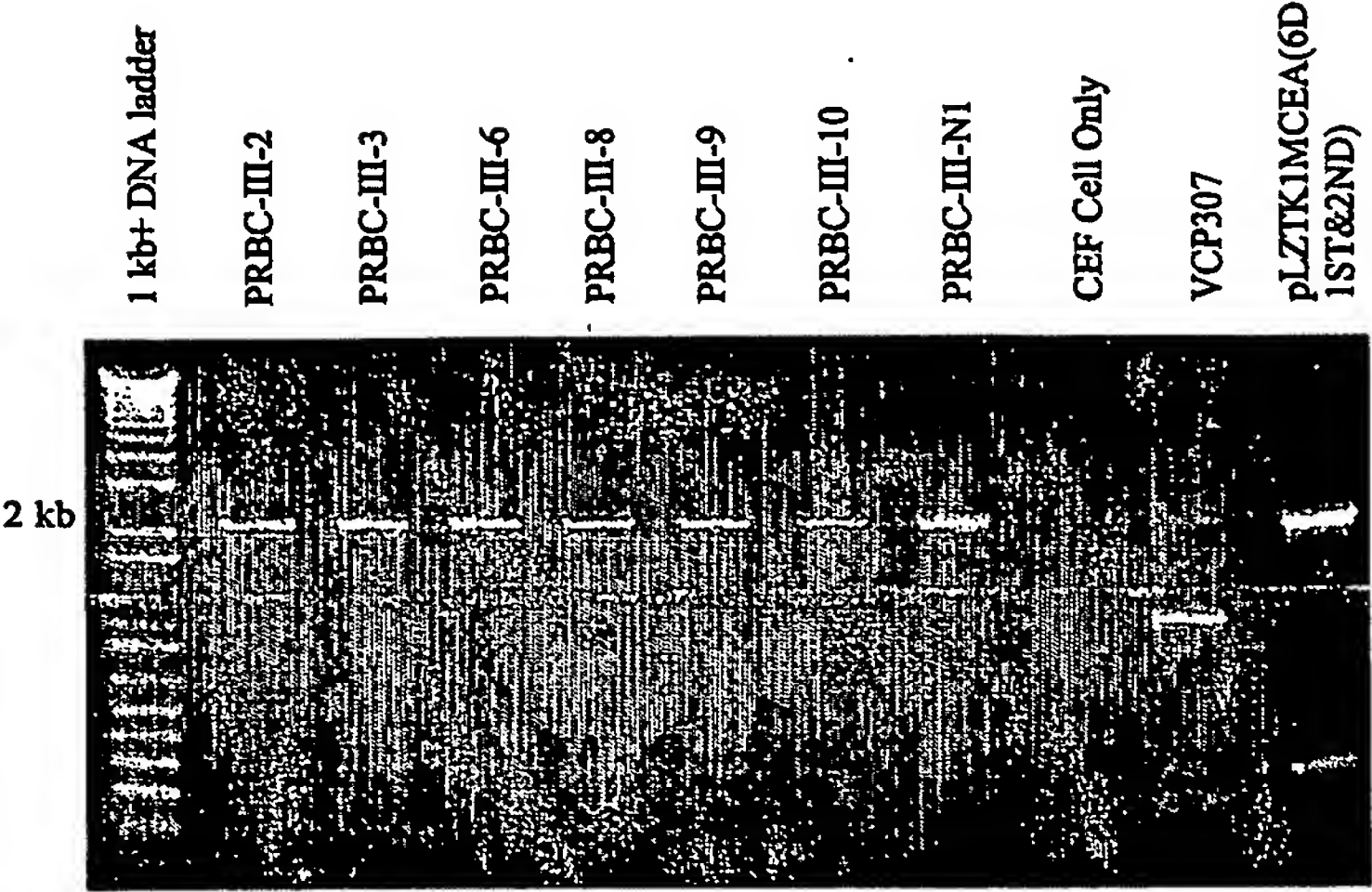
		1301		1350		
	mCEA (6D)	TCTCCTGCCA	TGCAGCCTCT	AACCCACCTG	CACAGTATTC	TTGGCTGATT
5	mCEA (6D, 1st&2nd)	<u>TTTCT</u> TGCCA	TGCAGC <u>ATCC</u>	AACCC <u>CCCTG</u>	CACAGT <u>ACTC</u>	<u>CTGGCTGATT</u>
		1351		1400		
	mCEA (6D)	GATGGGAACA	TCCAGCAACA	CACACAAGAG	CTCTTTATCT	CCAACATCAC
	mCEA (6D, 1st&2nd)	GATGG <u>AAACA</u>	<u>TT</u> CAGCAG <u>CA</u>	<u>TACT</u> CAAGAG	<u>TTATTTATAA</u>	<u>GCAACATAAC</u>
10		1401		1450		
	mCEA (6D)	TGAGAAGAAC	AGCGGACTCT	ATACCTGCCA	GGCCAATAAC	TCAGCCAGTG
	mCEA (6D, 1st&2nd)	TGAGAAGAAC	AGCGGACTCT	ATACT <u>TGCCA</u>	GGCCAATAAC	TCAGCCAGTG
15		1451		1500		
	mCEA (6D)	GCCACAGCAG	GACTACAGTC	AAGACAATCA	CAGTCTCTGC	GGAGCTGCCC
	mCEA (6D, 1st&2nd)	<u>GTC</u> ACAGCAG	GACTACAG <u>TT</u>	<u>AAA</u> ACAATA <u>A</u>	<u>CTGTTTCCGC</u>	GGAGCTGCCC
20		1501		1550		
	mCEA (6D)	AAGCCCTCCA	TCTCCAGCAA	CAACTCCAAA	CCCGTGGAGG	ACAAGGATGC
	mCEA (6D, 1st&2nd)	AAGCCCTCCA	TCTCCAGCAA	CAACTCCAAA	CCCGTGGAGG	ACAAGGATGC
25		1551		1600		
	mCEA (6D)	TGTGGCCTTC	ACCTGTGAAC	CTGAGGCTCA	GAACACAACC	TACCTGTGGT
	mCEA (6D, 1st&2nd)	TGTGGCCTTC	ACCTGTGAAC	CTGAGGCTCA	GAACACAACC	TACCTGTGGT
30		1601		1650		
	mCEA (6D)	GGGTAAATGG	TCAGAGCCTC	CCAGTCAGTC	CCAGGCTGCA	GCTGTCCAAT
	mCEA (6D, 1st&2nd)	GGGTAAATGG	TCAGAGCCTC	CCAGTCAGTC	CCAGGCTGCA	GCTGTCCAAT
35		1651		1700		
	mCEA (6D)	GGCAACAGGA	CCCTCACTCT	ATTCAATGTC	ACAAGAAATG	ACGCAAGAGC
	mCEA (6D, 1st&2nd)	GGCAACAGGA	CCCTCACTCT	ATTCAATGTC	ACAAGAAATG	ACGCAAGAGC
40		1701		1750		
	mCEA (6D)	CTATGTATGT	GGAATCCAGA	ACTCAGTGAG	TGCAAACCGC	AGTGACCCAG
	mCEA (6D, 1st&2nd)	CTATGTATGT	GGAATCCAGA	ACTCAGTGAG	TGCAAACCGC	AGTGACCCAG
45		1751		1800		
	mCEA (6D)	TCACCCTGGA	TGTCCTCTAT	GGGCCGGACA	CCCCATCAT	TTCCCCCCCCA
	mCEA (6D, 1st&2nd)	TCACCCTGGA	TGTCCTCTAT	GGGCCGGACA	CCCCATCAT	TTCCCCCCCCA
50		1801		1850		
	mCEA (6D)	GACTCGTCTT	ACCTTTTCGGG	AGCGGACCTC	AACCTCTCCT	GCCACTCGGC
	mCEA (6D, 1st&2nd)	GACTCGTCTT	ACCTTTTCGGG	AGCGGACCTC	AACCTCTCCT	GCCACTCGGC
		1851		1900		
	mCEA (6D)	CTCTAACCCA	TCCCCGCAGT	ATTCTTGGCG	TATCAATGGG	ATACCGCAGC
	mCEA (6D, 1st&2nd)	CTCTAACCCA	TCCCCGCAGT	ATTCTTGGCG	TATCAATGGG	ATACCGCAGC
		1901		1950		
	mCEA (6D)	AACACACACA	AGTTCTCTTT	ATCGCCAAAA	TCACGCCAAA	TAATAACGGG
	mCEA (6D, 1st&2nd)	AACACACACA	AGTTCTCTTT	ATCGCCAAAA	TCACGCCAAA	TAATAACGGG

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FIGURE 9D

		1951				2000
	mCEA (6D)	ACCTATGCCT	GTTTTGTCTC	TAACTTGGCT	ACTGGCCGCA	ATAATTCCAT
5	mCEA (6D, 1st&2nd)	ACCTATGCCT	GTTTTGTCTC	TAACTTGGCT	ACTGGCCGCA	ATAATTCCAT
		2001				2050
	mCEA (6D)	AGTCAAGAGC	ATCACAGTCT	CTGCATCTGG	AACTTCTCCT	GGTCTCTCAG
10	mCEA (6D, 1st&2nd)	AGTCAAGAGC	ATCACAGTCT	CTGCATCTGG	AACTTCTCCT	GGTCTCTCAG
		2051				2100
	mCEA (6D)	CTGGGGCCAC	TGTCGGCATC	ATGATTGGAG	TGCTGGTTGG	GGTTGCTCTG
	mCEA (6D, 1st&2nd)	CTGGGGCCAC	TGTCGGCATC	ATGATTGGAG	TGCTGGTTGG	GGTTGCTCTG
15		2101				
	mCEA (6D)	ATATAG				
	mCEA (6D, 1st&2nd)	ATATAG				

FIGURE 10



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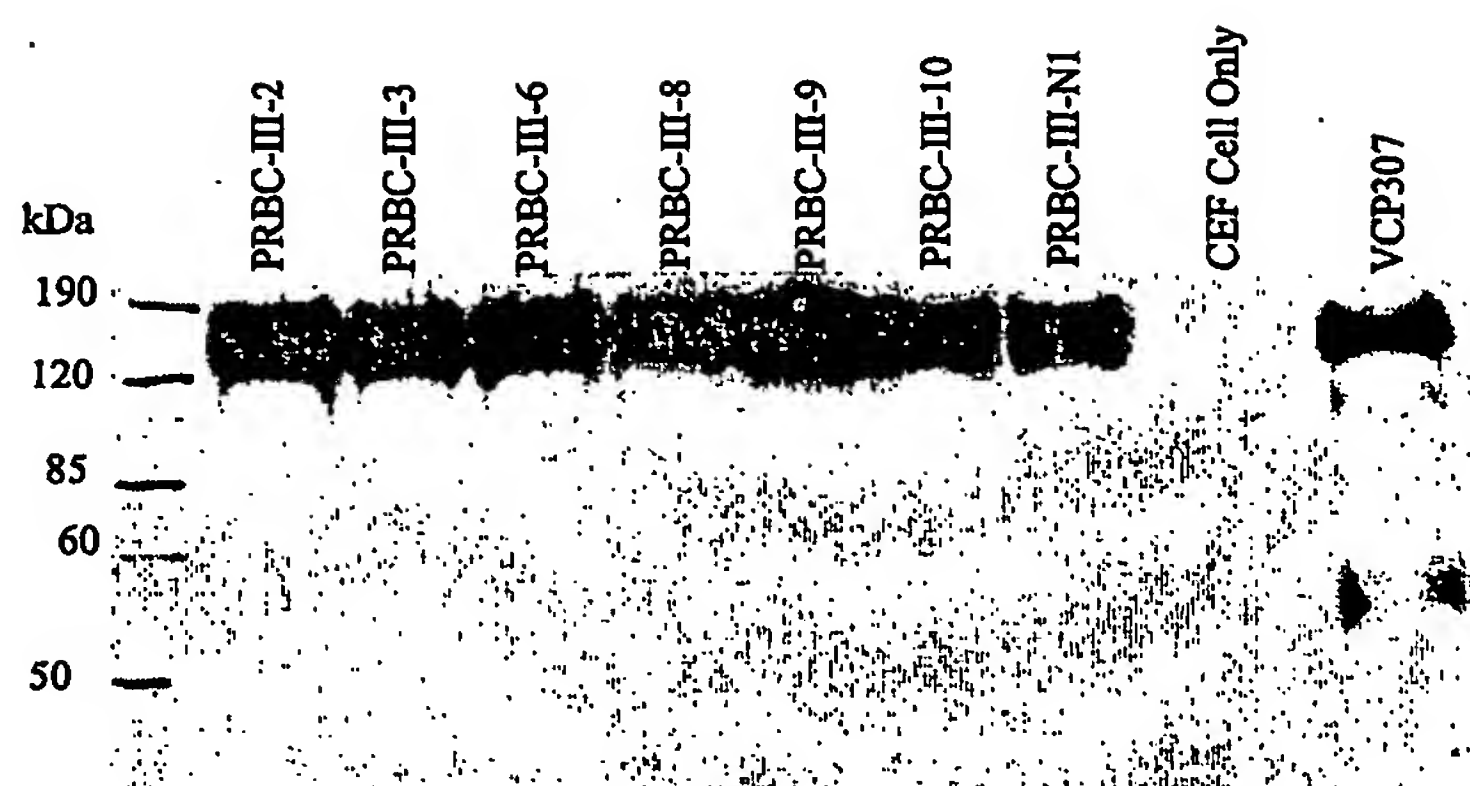
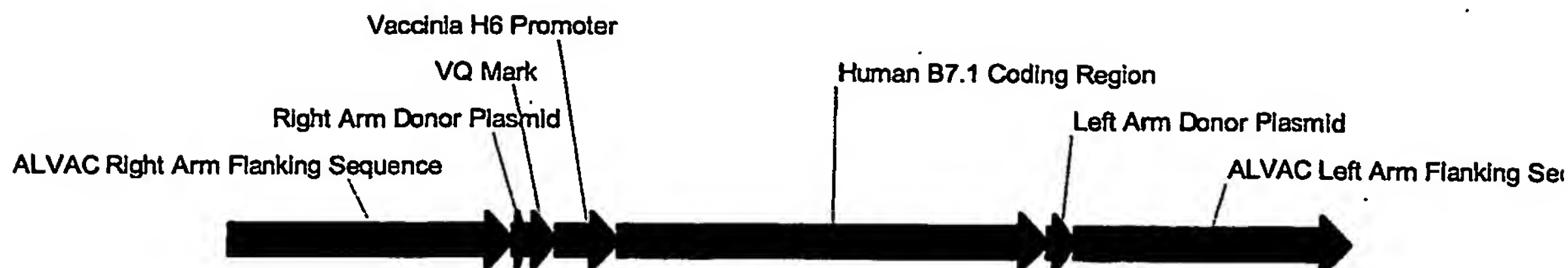
FIGURE 11

FIGURE 12

ALVAC Right Arm Flanking Sequence

~~~~~  
 1 TTAGATTGTG TTATTCATTA CATAGACGCT GCTAAATCTA CTATCGATTT  
 AATCTAACAC AATAAGTAAT GTATCTGCGA CGATTTAGAT GATAGCTAAA

## ALVAC Right Arm Flanking Sequence

~~~~~  
 51 AGAGATAGTA TCTCTACTAC CCACAAAAG AACTAAAGAC GCCATAGTGT
 TCTCTATCAT AGAGATGATG GGTGTTTTTC TTGATTTCTG CGGTATCACA

ALVAC Right Arm Flanking Sequence

~~~~~  
 101 ACTGGCCTAT AATAAAAGAC GCGTTGATAA GAGCTGTTCT GGAACGTGGT  
 TGACCGGATA TTATTTTCTG CGCAACTATT CTCGACAAGA CCTTGCACCA

## ALVAC Right Arm Flanking Sequence

~~~~~  
 151 GTTAAACTTA GAATACTACT AGGTTATTGG AAAAAGACCG ATATTATCTC
 CAATTTGAAT CTTATGATGA TCCAATAACC TTTTCTGGC TATAATAGAG

ALVAC Right Arm Flanking Sequence

~~~~~  
 201 TAAAGCTTCT ATCAAAAGTC TTAATGAGTT AGGTGTAGAT AGTATAGATA  
 ATTCGAAGA TAGTTTTCAG AATTACTCAA TCCACATCTA TCATATCTAT

## ALVAC Right Arm Flanking Sequence

~~~~~  
 251 TTAACAATAA GGTATTCATA TTCCCTATCA ATTCTAAAGT AGATGATATT
 AATGATGTTT CCATAAGTAT AAAGGATAGT TAAGATTTCA TCTACTATAA

ALVAC Right Arm Flanking Sequence

~~~~~  
 301 AATAACTCAA AGATGATGAT AGTAGATAAT AGATACGCTC ATATAATGAC  
 TTATTGAGTT TCTACTACTA TCATCTATTA TCTATGCGAG TATATTACTG

## ALVAC Right Arm Flanking Sequence

~~~~~  
 351 TGCAAATTTG GACGGTTCAC ATTTTAATCA TCACGCGTTC ATAAGTTTCA
 ACGTTTAAAC CTGCCAAGTG TAAATTAGT AGTGCGCAAG TATTCAAAGT

ALVAC Right Arm Flanking Sequence

~~~~~  
401 ACTGCATAGA TCAAAATCTC ACTAAAAAGA TAGCCGATGT ATTTGAGAGA  
TGACGTATCT AGTTTGTAGAG TGATTTTCT ATCGGCTACA TAAACTCTCT

## ALVAC Right Arm Flanking Sequence

~~~~~  
451 GATTGGACAT CTAACCTACGC TAAAGAAATT ACAGTTATAA ATAATACATA
CTAACCTGTA GATTGATGCG ATTTCTTTAA TGTCAATATT TATTATGTAT

ALVAC Right Arm Flanking Sequence

~~~~~  
501 ATGGATTTTG TTATCATCAG TTATATTTAA CATAAGTACA ATAAAAAGTA  
TACCTAAAAC AATAGTAGTC AATATAAATT GTATTCATGT TATTTTTCAT

## Right Arm Donor Plasmid

## ALVAC Right Arm Flanking Sequence

~~~~~  
551 TTAAATAAAA ATAATTACTT ACGAAAAAAT GACTAATTAG CTATAAAAAC
AATTTATTTT TATGAATGAA TGCTTTTTTA CTGATTAATC GATATTTTGT

VQ Mark

Right Arm Donor Plasmid

~~~~~  
601 CCGGGTTAAT TAATTAGTTA TTAGACAAGG TGAAAACGAA ACTATTTGTA  
GGCCCAATTA ATTAATCAAT AATCTGTTC ACTTTTGCTT TGATAAACAT

## VQ Mark

## Vaccinia H6 Promoter

~~~~~  
651 GCTTAATTAA TTAGAGCTTC TTTATTCTAT ACTTAAAAG TGAAAATAAA
CGAATTAATT AATCTCGAAG AAATAAGATA TGAATTTTTC ACTTTTATTT

Vaccinia H6 Promoter

~~~~~  
701 TACAAAGGTT CTTGAGGGTT GTGTAAATT GAAAGCGAGA AATAATCATA  
ATGTTTCCAA GAACTCCCAA CACAATTTAA CTTTCGCTCT TTATTAGTAT

## Human B7.1 Coding Region

## Vaccinia H6 Promoter

~~~~~  
751 AATTATTTCA TTATCGCGAT ATCCGTTAAG TTTGTATCGT AATGGGCCAC
TTAATAAAGT AATAGCGCTA TAGGCAATTC AAACATAGCA TTACCCGGTG

Human B7.1 Coding Region

~~~~~  
801 ACACGGAGGC AGGGAACATC ACCATCCAAG TGTCCATACC TCAATTTCTT  
TGTGCCTCCG TCCCTTGTAG TGGTAGGTTT ACAGGTATGG AGTTAAAGAA

## Human B7.1 Coding Region

~~~~~  
851 TCAGCTCTTG GTGCTGGCTG GTCTTTCTCA CTTCTGTTCA GGTGTTATCC
AGTCGAGAAC CACGACCGAC CAGAAAGAGT GAAGACAAGT CCACAATAGG

Human B7.1 Coding Region

~~~~~  
901 ACGTGACCAA GGAAGTGAAA GAAGTGGCAA CGCTGTCCTG TGGTCACAAT  
TGCACTGGTT CCTTCACTTT CTTACCGTT GCGACAGGAC ACCAGTGTTA

## Human B7.1 Coding Region

~~~~~  
951 GTTCTGTTG AAGAGCTGGC ACAAACCTCGC ATCTACTGGC AAAAGGAGAA
CAAAGACAAC TTCTCGACCG TGTGAGCG TAGATGACCG TTTCTCTT

Human B7.1 Coding Region

~~~~~  
1001 GAAAATGGTG CTGACTATGA TGTCTGGAGA CATGAATATA TGGCCCGAGT  
CTTTTACCAC GACTGATACT ACAGACCTCT GACTTATAT ACCGGGCTCA

## Human B7.1 Coding Region

~~~~~  
1051 ACAAGAACCG GACCATCTTT GATATCACTA ATAACCTCTC CATTGTGATC
TGTTCTTGGC CTGGTAGAAA CTATAGTGAT TATTGGAGAG GTAACACTAG

Human B7.1 Coding Region

~~~~~  
1101 CTGGCTCTGC GCCCATCTGA CGAGGGCACA TACGAGTGTG TTGTTCTGAA  
GACCGAGACG CGGGTAGACT GCTCCCGTGT ATGCTCACAC AACAAGACTT

## Human B7.1 Coding Region

~~~~~  
1151 GTATGAAAAA GACGCTTTCA AGCGGGAACA CCTGGCTGAA GTGACGTTAT
CATACTTTTT CTGCGAAAGT TCGCCCTTGT GGACCGACTT CACTGCAATA

Human B7.1 Coding Region

~~~~~  
1201 CAGTCAAAGC TGACTTCCCT ACACCTAGTA TATCTGACTT TGAAATTCCA  
GTCAGTTTCG ACTGAAGGGA TGTGGATCAT ATAGACTGAA ACTTTAAGGT

## Human B7.1 Coding Region

~~~~~  
1251 ACTTCTAATA TTAGAAGGAT AATTGCTCA ACCTCTGGAG GTTTTCCAGA
TGAAGATTAT AATCTTCTA TTAAACGAGT TGGAGACCTC CAAAAGGTCT

Human B7.1 Coding Region

~~~~~  
1301 GCCTCACCTC TCCTGGTTGG AAAATGGAGA AGAATTAAAT GCCATCAACA  
CGGAGTGGAG AGGACCAACC TTTTACCTCT TCTTAATTTA CGGTAGTTGT

## Human B7.1 Coding Region

~~~~~  
1351 CAACAGTTTC CCAAGATCCT GAACTGAGC TCTATGCTGT TAGCAGCAAA
GTTGTCAAAG GGTCTAGGA CTTTGAATCG AGATACGACA ATCGTCGTTT

Human B7.1 Coding Region

~~~~~  
1401 CTGGATTTCA ATATGACAAC CAACCACAGC TTCATGTGTC TCATCAAGTA  
GACCTAAAGT TATACTGTTG GTTGGTGTG AAGTACACAG AGTAGTTCAT

## Human B7.1 Coding Region

~~~~~  
1451 TGGACATTTA AGAGTGAATC AGACCTTCAA CTGGAATACA ACCAAGCAAG
ACCTGTAAAT TCTCACTTAG TCTGGAAGTT GACCTTATGT TGGTTCGTTC

Human B7.1 Coding Region

~~~~~  
1501 AGCATTTTCC TGATAACCTG CTCCCATCCT GGGCCATTAC CTTAATCTCA  
TCGTAAAAGG ACTATTGGAC GAGGGTAGGA CCCGGTAATG GAATTAGAGT

## Human B7.1 Coding Region

~~~~~  
1551 GTAAATGGAA TTTTCGTGAT ATGCTGCCTG ACCTACTGCT TTGCCCCACG
CATTTACCTT AAAAGCACTA TACGACGGAC TGGATGACGA AACGGGGTGC

Human B7.1 Coding Region

~~~~~  
1601 CTGCAGAGAG AGAAGGAGGA ATGAGAGATT GAGAAGGGAA AGTGACGTC  
GACGTCTCTC TCTTCCTCCT TACTCTCTAA CTCTCCCTT TCACATGCAG

## Left Arm Donor Plasmid

~~~~~

Human B7.1 Coding Region

~~~~~

1651 CTGTATAATT TTTATCTCGA GCCCGGGAAG CTTGAATTCT TTTTATTGAT  
GACATATTAA AAATAGAGCT CGGGCCCTTC GAACTTAAGA AAAATAACTA

## ALVAC Left Arm Flanking Sequence

~~~~~

Left Arm Donor Plasmid

~~~~~

1701 TAACTAGTCA AATGAGTATA TATAATTGAA AAAGTAAAAT ATAAATCATA  
ATTGATCAGT TTAATCATAT ATATTAACCTT TTTTATTTTA TATTTAGTAT

## ALVAC Left Arm Flanking Sequence

~~~~~

1751 TAATAATGAA ACGAAATATC AGTAATAGAC AGGAACTGGC AGATTCTTCT
ATTATTACTT TGCTTTATAG TCATTATCTG TCCTTGACCG TCTAAGAAGA

ALVAC Left Arm Flanking Sequence

~~~~~

1801 TCTAATGAAG TAAGTACTGC TAAATCTCCA AAATTAGATA AAAATGATAC  
AGATTACTTC ATTCATGACG ATTTAGAGGT TTTAATCTAT TTTTACTATG

## ALVAC Left Arm Flanking Sequence

~~~~~

1851 AGCAAATACA GCTTCATTCA ACGAATTACC TTTTAATTTT TTCAGACACA
TCGTTTATGT CGAAGTAAGT TGCTTAATGG AAAATTAAAA AAGTCTGTGT

ALVAC Left Arm Flanking Sequence

~~~~~

1901 CCTTATTACA AACTAACTAA GTCAGATGAT GAGAAAGTAA ATATAAATTT  
GGAATAATGT TTGATTGATT CAGTCTACTA CTCTTTCATT TATATTTAAA

## ALVAC Left Arm Flanking Sequence

~~~~~  
1951 AACTTATGGG TATAATATAA TAAAGATTCA TGATATTAAT AATTTACTTA
TTGAATACCC ATATTATATT ATTTCTAAGT ACTATAATTA TTAAATGAAT

ALVAC Left Arm Flanking Sequence

~~~~~  
2001 ACGATGTAA TAGACTTATT CCATCAACCC CTTCAAACCT TTCTGGATAT  
TGCTACAATT ATCTGAATAA GGTAGTTGGG GAAGTTTGGG AAGACCTATA

## ALVAC Left Arm Flanking Sequence

~~~~~  
2051 TATAAAATAC CAGTTAATGA TATTAAAATA GATTGTTTAA GAGATGTAAA
ATATTTTATG GTCAATTACT ATAATTTTAT CTAACAAATT CTCTACATTT

ALVAC Left Arm Flanking Sequence

~~~~~  
2101 TAATTATTTG GAGGTAAAGG ATATAAAATT AGTCTATCTT TCACATGGAA  
ATTAATAAAC CTCCATTTC TATATTTTAA TCAGATAGAA AGTGTACCTT

## ALVAC Left Arm Flanking Sequence

~~~~~  
2151 ATGAATTACC TAATATTAAT AATTATGATA GGAATTTTTT AGGATTTACA
TACTTAATGG ATTATAATTA TTAATACTAT CCTTAAAAA TCCTAAATGT

ALVAC Left Arm Flanking Sequence

~~~~~  
2201 GCTGTTATAT GTATCAACAA TACAGGCAGA TCTATGGTTA TGGTAAACA  
CGACAATATA CATAGTTGTT ATGTCCGTCT AGATACCAAT ACCATTTTGT

## ALVAC Left Arm Flanking Sequence

~~~~~  
2251 CTGTAACGGG AAGCAGCAT
GACATTGCCC TTCGTCGTA

FIGURE 13

C3R Arm

~~~~~  
1    ATATTATTAA AACTATTAGA TAACATAGCT TTATGTAAAG GAGTATTTCC  
     TATAATAATT TTGATAATCT ATTGTATCGA AATACATTTC CTCATAAAGG

## C3R Arm

~~~~~  
51 AGATAACTTA GCTTTAGCAT TTACGTAAGC ACCGTGGTCA AGTAAGAGTT
 TCTATTGAAT CGAAATCGTA AATGCATTTC TGGCACCAGT TCATTCTCAA

C3R Arm

~~~~~  
101    TAACAAATTC TGTTTTTCATA GAACTAACTG CCATGTATAG AGGAGTGAAA  
     ATTGTTTAAG ACAAAGTAT CTTGATTGAC GGTACATATC TCCTCACTTT

## C3R Arm

~~~~~  
151 CCTTTATGAT TATAGACGTT TACATAGCAA CCATATAATA AGATCGCATT
 GGAAATACTA ATATCTGCAA ATGTATCGTT GGTATATTAT TCTAGCGTAA

C3R Arm

~~~~~  
201    CAGTATATTA ATATCTTTCA TTTCTATAGC TATGTGAATA ACATGTTTAT  
     GTCATATAAT TATAGAAAGT AAAGATATCG ATACACTTAT TGTACAAATA

## C3R Arm

~~~~~  
251 CTAATCCTAC CAACTTTGTA TCAGTACCGT ACTTCAGTAA TAAGTTTACT
 GATTAGGATG GTTGAAACAT AGTCATGGCA TGAAGTCATT ATTCAAATGA

C3R Arm

~~~~~  
301    ATAGTTTGT TTTTAGATGC AACAGCTATA TTTAGAACGG TATCTATATG  
     TATCAAAACA AAAATCTACG TTGTCGATAT AAATCTTGCC ATAGATATAC

## C3R Arm

~~~~~  
351 ATTATTAACC ACATTAACAT TAGATCCTCT TTCTAAAAGT GTCTTTGTTG
TAATAATTGG TGTAATTGTA ATCTAGGAGA AAGATTTTCA CAGAAACAAC

C3R Arm

~~~~~  
401 TTTCGATATC GTTACGTGAA ACAGCGTAAT GTAAGGGACT GCCCATAACAG  
AAAGCTATAG CAATGCACTT TGTCGCATTA CATTCCTCTGA CGGGTATGTC

## C3R Arm

~~~~~  
451 TCATCTATTA CGTTTATATC AGCTCCTAGA TTTAACAGAA GTGCTGTTAC
AGTAGATAAT GCAAATATAG TCGAGGATCT AAATTGTCTT CACGACAATG

C3R Arm

~~~~~  
501 ATCTTTTCTT CTATTAATTA CCGAATGATG TAATGGGGTT TTACCTAAAT  
TAGAAAAGAA GATAATTAAT GGCTTACTAC ATTACCCCAA AATGGATTTA

## C3R Arm

~~~~~  
551 CATCTTGTTT GTTTATAGGC ACTCCGTGAT TTATAAGTAA CGCTATTATA
GTAGAACAAG CAAATATCCG TGAGGCACTA AATATTCATT GCGATAATAT

C3R Arm

~~~~~  
601 TCGTAACTAC AATTATTTTT AAGTGCCTTT ATGAGATACT GTTTATGCAA  
AGCATTGATG TTAATAAAAA TTCACGGAAA TACTCTATGA CAAATACGTT

## C3R Arm

~~~~~  
651 AAATAAACTT TTATCTATTT TAATACTATT ATCTAACAAT ATCCTAATTA
TTTATTTGAA AATAGATAAA ATTATGATAA TAGATTGTTA TAGGATTAAT

C3R Arm

~~~~~  
701 AATCTATATT CTTATACTTT ATAGCGTAAT GTAACGGAGT TTCAAAATTT  
TTAGATATAA GAATATGAAA TATCGCATTA CATTGCCTCA AAGTTTTAAA

## C3R Arm

~~~~~  
751 CTAGTTTGTA TATTAAGATC AATATTAAAA TCTATAAATA TTTTATACAT
GATCAAACAT ATAATTCTAG TTATAATTTT AGATATTTAT AAAATATGTA

C3R Arm

~~~~~  
801 ATCATCAGAT ATCTTATCAT ACAGTACATC GTAATAATTT AGAAAGAATC  
TAGTAGTCTA TAGAATAGTA TGTCATGTAG CATTATTAAA TCTTTCTTAG

## C3R Arm

~~~~~  
851 TATTACAATT AACACCTTTT TTTAATAAAT ATCTAGTTAA TGACTTATTG
ATAATGTTAA TTGTGGAAAA AAATTATTTA TAGATCAATT ACTGAATAAC

C3R Arm

~~~~~  
901 TTTCTATATA CAGAAATATA TAACGGACTA TTTCCAGAAT GTATCTGTTC  
AAAGATATAT GTCTTTATAT ATTGCCTGAT AAAGGTCTTA CATAGACAAG

## C3R Arm

~~~~~  
951 TATGTCAGCG CCAGAATCTA TTAGTAGTTT AGCAATTTCT GTATTATCTA
ATACAGTCGC GGTCTTAGAT AATCATCAAA TCGTTAAAGA CATAATAGAT

C3R Arm

~~~~~  
1001 AACTAGCAGC TTTATGAAGA GGAGGATTTT TACATTTTAA AATATCGGCA  
TTGATCGTCG AAATACTTCT CCTCCTAAAA ATGTAAAATT TTATAGCCGT

## C3R Arm

~~~~~  
1051 CCGTGTTCTA GTAATAATTT TACCATTTCT ATATCAGAAA TACTTACGGC
GGCACAAGAT CATTATTAAA ATGGTAAAGA TATAGTCTTT ATGAATGCCG

C3R Arm

~~~~~  
1101 TAAATACAAA GACGTTGATA GTATATTTAC GTTATTGTAT TTGCATTTTT  
ATTTATGTTT CTGCAACTAT CATATAAATG CAATAACATA AACGTAAAAA

## C3R Arm

~~~~~  
1151 TAAGTATATA CCTTACTAAA TTTATATCTC TATACCTTAT AGCTTTATGC
ATTCATATAT GGAATGATTT AAATATAGAG ATATGGAATA TCGAAATACG

C3R Arm

~~~~~  
1201 AGTTCATTTA TAAGTCTTCC ATTACTCATT TCTGGTAATG AAGTATTATA  
TCAAGTAAAT ATTCAGAAGG TAATGAGTAA AGACCATTAC TTCATAATAT

## C3R Arm

~~~~~  
1251 TATCATTATG ATATTATCTC TATTTTATTC TAATAAAAAC CGTTATCATG
ATAGTAATAC TATAATAGAG ATAAAATAAG ATTATTTTGT GCAATAGTAC

C3R Arm

~~~~~  
1301 TTATTTATTA TTTGTTATAA TTATACTATT TAATAAATTA TACCAAATAC  
AATAAATAAT AAACAATATT AATATGATAA ATTATTTAAT ATGGTTTATG

## C3R Arm

~~~~~  
1351 TTAGATACTT ATTAATACCA TCCTAGAACT TGTATTTCTT GCCCCCTAAA
AATCTATGAA TAATTATGGT AGGATCTTGA ACATAAAGAA CGGGGGATTT

C3R Arm

~~~~~  
1401 CTTGGACATG CACTCCATTA GCGGTTTCTT GTTTTCGACA TCGTCCTCCT  
GAACCTGTAC GTGAGGTAAT CCGCAAAGAA CAAAAGCTGT AGCAGGAGGA

## C3R Arm

~~~~~  
1451 TAACATATCC TACTGTTATG TGAGGATTCC ACGGATTATC TACTGTGATA
ATTGTATAGG ATGACAATAC ACTCCTAAGG TGCCTAATAG ATGACACTAT

C3R Arm

~~~~~  
1501 TCACCAAACA CGTCCTTCGA ACAGGGTACC GCATTTCAGCA GAACATTTCT  
AGTGGTTTGT GCAGGAAGCT TGTCCCATGG CGTAAGTCGT CTTGTAAAGA

## C3R Arm

~~~~~  
1551 TAGGGCTCTA AGTTCATCAG ATACCTCCAG TTTCATAACT ACAGCGCATC
ATCCCGAGAT TCAAGTAGTC TATGGAGGTC AAAGTATTGA TGTCGCGTAG

C3R Arm

~~~~~  
1601 CTTTCGCTCC CAACTGTTTA GAGGCGTTAC TCTGAGGAAA ACACATCTCT  
GAAAGCGAGG GTTGACAAAT CTCCGCAATG AGACTCCTTT TGTGTAGAGA

## C3R Arm

~~~~~  
1651 TCTTTACAGA CTATAGAAAT AGTCTGTAAA TCTTGATCAG TTATTTGCTT
AGAAATGTCT GATATCTTTA TCAGACATTT AGAACTAGTC AATAAACGAA

C3R Arm

~~~~~  
1701 TTTGAAATTT TCAAATCTAT CACATTGATC CATATTTGCT ATTCCAAGAG  
AAACTTTAAA AGTTTAGATA GTGTAAC TAGTATAACGA TAAGGTTCTC

## C3R Arm

~~~~~  
1751 TTATATGAGG AAAAATATCA CATCCTGTCA TGTATTTTAT TGTAACATTA
AATATACTCC TTTTATAGT GTAGGACAGT ACATAAAATA ACATTGTAAT

C3R Arm

~~~~~  
1801 TTATAATCTG TAACATCAGT ATCTAACCTA ACGTCGTAAA AGTTAACAGA  
AATATTAGAC ATTGTAGTCA TAGATTGGAT TGCAGCATTT TCAATTGTCT

## C3R Arm

~~~~~  
1851 TGCCCAGTTA CTATAATCCC AAGGAACCTT AACATCTAAT CCCATTAAAA
ACGGGTCAAT GATATTAGGG TTCCTTGGAA TTGTAGATTA GGGTAATTTT

C3R Arm

~~~~~  
1901 TAGTATCCTT TCTACTATTT TTTTCATTGG CAAGTATGTG GCTTAGTTTA  
ATCATAGGAA AGATGATAAA AAAAGTAACC GTTCATACAC CGAATCAAAT

## C3R Arm

~~~~~  
1951 CACAAAATTC CTGCCATTTT GTAACGATAG CGAAGCAATA GCTTGTATGC
GTGTTTTAAG GACGGTAAAA CATTGCTATC GCTTCGTTAT CGAACATACG

H6 promoter
~~~~~  
2001 TTTTATTG ATTAAGTAGT CATAAAATC GGGATCCTTC TTTATTCTAT  
AAAAATAAAC TAATTGATCA GTATTTTATG CCCTAGGAAG AAATAAGATA

H6 promoter  
~~~~~  
2051 ACTTAAAAAG TGAAAATAAA TACAAAGGTT CTTGAGGGTT GTGTAAATT
TGAATTTTTC ACTTTTATTT ATGTTTCCAA GAACTCCCAA CACAATTAA

H6 promoter
~~~~~  
2101 GAAAGCGAGA AATAATCATA AATTATTTCA TTATCGCGAT ATCCGTTAAG  
CTTTCGCTCT TTATTAGTAT TTAATAAAGT AATAGCGCTA TAGGCAATTC

MCEA  
~~~~~  
H6 promoter
~~~~~  
2151 TTTGTATCGT AATGGAGTCT CCCTCGGCCC OTCCCCACAG ATGGTGCATC  
AAACATAGCA TTACCTCAGA GGGAGCCGGG GAGGGGTGTC TACCACGTAG

MCEA  
~~~~~  
2201 CCCTGGCAGA GGCTCCTGCT CACAGCCTCA CTTCTAACCT TCTGGAACCC
GGGACCGTCT CCGAGGACGA GTGTCGGAGT GAAGATTGGA AGACCTTGGG

MCEA
~~~~~  
2251 GCCCACCCT GCAAGCTCA CTATTGAATC CACGCCGTTT AATGTCGCAG  
CGGGTGGTGA CGGTTGAGT GATAACTTAG GTGCGGCAAG TTACAGCGTC

MCEA  
~~~~~  
2301 AGGGGAAGGA GGTGCTTCTA CTTGTCCACA ATCTGCCCCA GCATCTTTT
TCCCCTTCCT CCACGAAGAT GAACAGGTGT TAGACGGGGT CGTAGAAAA

MCEA
~~~~~  
2351 GGCTACAGCT GGTACAAAGG TGAAAGAGTG GATGGCAACC GTCAAATTAT  
CCGATGTCGA CCATGTTTCC ACTTTCTCAC CTACCGTTGG CAGTTTAATA

MCEA  
~~~~~  
2401 AGGATATGTA ATAGGAACTC AACAAGCTAC CCCAGGGCCC GCATACAGTG
TCCTATACAT TATCCTTGAG TTGTTCGATG GGGTCCCGGG CGTATGTCAC

MCEA
~~~~~  
2451 GTCGAGAGAT AATATACCCC AATGCATCCC TGCTGATCCA GAACATCATC  
CAGCTCTCTA TTATATGGGG TTACGTAGGG ACGACTAGGT CTTGTAGTAG

MCEA  
~~~~~  
2501 CAGAATGACA CAGGATTCTA CACCCTACAC GTCATAAAGT CAGATCTTGT
GTCTTACTGT GTCCTAAGAT GTGGGATGTG CAGTATTTCA GTCTAGAACA

MCEA

~~~~~  
2551 GAATGAAGAA GCAACTGGCC AGTTCCGGGT ATACCCGGAA CTCCCTAAGC  
CTTACTTCTT CGTTGACCGG TCAAGGCCCA TATGGGCCTT GAGGGATTCG

## MCEA

~~~~~  
2601 CTTCTATTAG CTCCAATAAT AGTAAGCCTG TCGAAGACAA AGATGCCGTC
GAAGATAATC GAGGTTATTA TCATTGCGAC AGCTTCTGTT TCTACGGCAG

MCEA

~~~~~  
2651 GCTTTTACAT GCGAGCCCGA AACTCAAGAC GCAACATATC TCTGGTGGGT  
CGAAAATGTA CGCTCGGGCT TTGAGTTCTG CGTTGTATAG AGACCACCCA

## MCEA

~~~~~  
2701 GAACAACCAG TCCCTGCCTG TGTCCCCTAG ACTCCAATC AGCAACGGAA
CTTGTTGGTC AGGGACGGAC ACAGGGGATC TGAGGTTGAG TCGTTGCCTT

MCEA

~~~~~  
2751 ATAGAACTCT GACCCTGTTT AACGTGACCA GGAACGACAC AGCAAGCTAC  
TATCTTGAGA CTGGGACAAA TTGCACTGGT CCTTGCTGTG TCGTTCGATG

## MCEA

~~~~~  
2801 AAATGCGAAA CCCAAAATCC AGTCAGCGCC AGGAGGTCTG ATTCAGTGAT
TTTACGCTTT GGGTTTTAGG TCAGTCGCGG TCCTCCAGAC TAAGTCACTA

MCEA

~~~~~  
2851 TCTCAACGTG CTTTACGGAC CCGATGCTCC TACAATCAGC CCTCTAAACA  
AGAGTTGCAC GAAATGCCTG GGCTACGAGG ATGTTAGTCG GGAGATTGT

## MCEA

~~~~~  
2901 CAAGCTATAG ATCAGGGGAA AATCTGAATC TGAGCTGTCA TGCCGCTAGC
GTTGATATC TAGTCCCCTT TTAGACTTAG ACTCGACAGT ACGGCGATCG

MCEA

~~~~~  
2951 AATCCTCCCG CCCAATACAG CTGGTTTGTC AATGGCACTT TCCAACAGTC  
TTAGGAGGGC GGGTTATGTC GACCAACAG TTACCGTGAA AGGTTGTCAG

## MCEA

~~~~~  
3001 CACCCAGGAA CTGTTTATTC CCAATATTAC CGTGAACAAT AGTGGATCCT
GTGGGTCCTT GACAAGTAAG GGTTATAATG GCACTTGTTA TCACCTAGGA

MCEA

~~~~~  
3051 ACACGTGCCA AGCTCACAAT AGCGACACCG GACTCAACCG CACAACCGTG  
TGTGCACGGT TCGAGTGTTA TCGCTGTGGC CTGAGTTGGC GTGTTGGCAC

## MCEA

~~~~~  
3101 ACGACGATTA CCGTGTATGA GCCACCAAAA CCATTCATAA CTAGTAACAA
TGCTGCTAAT GGCACATACT CGGTGGTTTT GGTAAGTATT GATCATTGTT

MCEA

~~~~~  
3151 TTCTAACCCA GTTGAGGATG AGGACGCAGT TGCATTAACT TGTGAGCCAG  
AAGATTGGGT CAACTCCTAC TCCTGCGTCA ACGTAATTGA ACACTCGGTC

## MCEA

~~~~~  
3201 AGATTCAAAA TACCACTTAT TTATGGTGGG TCAATAACCA AAGTTTGCCG
TCTAAGTTTT ATGGTGAATA AATACCACCC AGTTATTGGT TTCAAACGGC

MCEA

~~~~~  
3251 GTTAGCCAC GCTTGCAGTT GTCTAATGAT AACCGCACAT TGACACTCCT  
CAATCGGGTG CGAACGTCAA CAGATTACTA TTGGCGTGTA ACTGTGAGGA

## MCEA

~~~~~  
3301 GTCCGTTACT CGCAATGATG TAGGACCTTA TGAGTGTGGC ATTCAGAATG
CAGGCAATGA GCGTTACTAC ATCCTGGAAT ACTCACACCG TAAGTCTTAC

MCEA

~~~~~  
3351 AATTATCCGT TGATCACTCC GACCCTGTTA TCCTTAATGT TTTGTATGGC  
TTAATAGGCA ACTAGTGAGG CTGGGACAAT AGGAATTACA AAACATACCG

## MCEA

~~~~~  
3401 CCAGACGACC CAACTATATC TCCATCATAC ACCTACTACC GTCCCGGCGT
GGTCTGCTGG GTTGATATAG AGGTAGTATG TGGATGATGG CAGGGCCGCA

MCEA

~~~~~  
3451 GAACTTGAGC CTTTCTTGCC ATGCAGCATC CAACCCCCCT GCACAGTACT  
CTTGAACCTG GAAAGAACGG TACGTCGTAG GTTGGGGGGA CGTGTCATGA

## MCEA

~~~~~  
3501 CCTGGCTGAT TGATGGAAAC ATTCAGCAGC ATACTCAAGA GTTATTTATA
GGACCGACTA ACTACCTTTG TAAGTCGTCT TATGAGTTCT CAATAAATAT

MCEA

~~~~~  
3551 AGCAACATAA CTGAGAAGAA CAGCGGACTC TATACTTGCC AGGCCAATAA  
TCGTTGTATT GACTCTTCTT GTCGCCTGAG ATATGAACGG TCCGGTTATT

## MCEA

~~~~~  
3601 CTCAGCCAGT GGTCACAGCA GGACTACAGT TAAACAATA ACTGTTTCCG
GAGTCGGTCA CCAGTGTCGT CCTGATGTCA ATTTTGTTAT TGACAAAGGC

MCEA

~~~~~  
3651 CGGAGCTGCC CAAGCCCTCC ATCTCCAGCA ACAACTCCAA ACCCGTGGAG  
GCCTCGACGG GTTCGGGAGG TAGAGGTCGT TGTGAGGTT TGGGCACCTC

## MCEA

~~~~~  
3701 GACAAGGATG CTGTGGCCTT CACCTGTGAA CCTGAGGCTC AGAACACAAC
CTGTTCTTAC GACACCGGAA GTGGACACTT GGAATCCGAG TCTTGTGTTG

MCEA

~~~~~  
3751 CTACCTGTGG TGGGTAAATG GTCAGAGCCT CCCAGTCAGT CCCAGGCTGC  
GATGGACACC ACCCATTAC CAGTCTCGGA GGGTCAGTCA GGGTCCGACG

## MCEA

~~~~~  
3801 AGCTGTCCAA TGGCAACAGG ACCCTCACTC TATTCAATGT CACAAGAAAT
TCGACAGGTT ACCGTTGTCC TGGGAGTGAG ATAAGTTACA GTGTTCTTTA

MCEA

~~~~~  
3851 GACGCAAGAG CCTATGTATG TGAATCCAG AACTCAGTGA GTGCAAACCG  
CTGCGTTCTC GGATACATAC ACCTTAGGTC TTGAGTCACT CACGTTTGGC

## MCEA

~~~~~  
3901 CAGTGACCCA GTCACCCTGG ATGTCCTCTA TGGGCCGGAC ACCCCCATCA
GTCAGTGGGT CAGTGGGACC TACAGGAGAT ACCCGGCCTG TGGGGGTAGT

MCEA

~~~~~  
3951 TTTCCCCCCC AGACTCGTCT TACCTTTCGG GAGCGAACCT CAACCTCTCC  
AAAGGGGGGG TCTGAGCAGA ATGGAAAGCC CTCGCTTGA GTTGAGAGG

## MCEA

~~~~~  
4001 TGCCACTCGG CCTCTAACCC ATCCCCGCAG TATTCTTGGC GTATCAATGG
ACGGTGAGCC GGAGATTGGG TAGGGGCGTC ATAAGAACCG CATAGTTACC

MCEA

~~~~~  
4051 GATACCGCAG CAACACACAC AAGTTCTCTT TATCGCCAAA ATCAGCCAA  
CTATGGCGTC GTTGTGTGTG TTCAAGAGAA ATAGCGGTTT TAGTGCGGTT

## MCEA

~~~~~  
4101 ATAATAACGG GACCTATGCC TGTTTTGTCT CTAAGTTGGC TACTGGCCGC
TATTATTGCC CTGGATACGG ACAAACAGA GATTGAACCG ATGACCGGCG

MCEA

~~~~~  
4151 AATAATTCCA TAGTCAAGAG CATCACAGTC TCTGCATCTG GAACTTCTCC  
TTATTAAGGT ATCAGTTCTC GTAGTGTCAG AGACGTAGAC CTTGAAGAGG

## MCEA

~~~~~  
4201 TGGTCTCTCA GCTGGGGCCA CTGTCGGCAT CATGATTGGA GTGCTGGTTG
ACCAGAGAGT CGACCCCGGT GACAGCCGTA GTACTAACCT CACGACCAAC

MCEA

~~~~~  
4251 GGGTTGCTCT GATATAGTTT TTATCTCGAG GAATTCCTGC AGCCCGGGTT  
CCCAACGAGA CTATATCAAA AATAGAGCTC CTTAAGGACG TCGGGCCCAA

## C3L Arm

~~~~~  
4301 TTTATAGCTA ATTAGTCAAA TGTGAGTTAA TATTAGTATA CTACATTACT
AAATATCGAT TAATCAGTTT AACTCAATT ATAATCATAT GATGTAATGA

C3L Arm

~~~~~  
4351 AATTTATTAC ATATTCATTT ATATCAATCT AGTAGCATTT AGCTTTTATA  
TTAAATAATG TATAAGTAAA TATAGTTAGA TCATCGTAAA TCGAAATAT

## C3L Arm

~~~~~  
4401 AAACAATATA ACTGAATAGT ACATACTTTA CTAATAAGTT ATAAATAAGA
TTTGTATAT TGAATTATCA TGTATGAAAT GATTATTCAA TATTTATTCT

C3L Arm

~~~~~  
4451 GATACATATT TATAGTATTT TACTTTCTAC ACTGAATATA ATAATATAAT  
CTATGTATAA ATATCATAAA ATGAAAGATG TGACTTATAT TATTATATTA

## C3L Arm

~~~~~  
4501 TATACAAATA TAATTTTTAA TACTATATAG TATATAACTG AAATAAAATA
ATATGTTTAT ATTAAAAATT ATGATATATC ATATATTGAC TTTATTTTAT

C3L Arm

~~~~~  
4551 CCAGTGTAAT ATAGTTATTA TACATTTATA CCACATCAAA GATGAGTTAT  
GGTCACATTA TATCAATAAT ATGTAAATAT GGTGTAGTTT CTAATCAATA

## C3L Arm

~~~~~  
4601 AACATCAGTG TCACTGTTAG CAACAGTAGT TATACGATGA GTAGTTACTC
TTGTAGTCAC AGTGACAATC GTTGTCATCA ATATGCTACT CATCAATGAG

C3L Arm

~~~~~  
4651 TCGTATGGCG TTAGTATGTA TGTATCTTCT AGTTTTCTTA GTAGGCATTA  
AGCATACCGC AATCATACAT ACATAGAAGA TCAAAAGAAT CATCCGTAAT

## C3L Arm

~~~~~  
4701 TAGGAAACGT CAAGCTTATA AGGTTATTAA TGGTATCTAG AAATATATCT
ATCCTTTGCA GTTCGAATAT TCCAATAATT ACCATAGATC TTTATATAGA

C3L Arm

~~~~~  
4751 ATTATACCGT TTCTCAACTT GGGAATAGCC GATTGCTGT TTGTGATATT  
TAATATGGCA AAGAGTTGAA CCCTTATCGG CTAAACGACA AACACTATAA

## C3L Arm

~~~~~  
4801 CATACTTTA TACATTATAT ACATACTAAG TAATTTCCAT TGGCATTTTG
GTATGGAAAT ATGTAATATA TGTATGATTC ATTAAAGGTA ACCGTAAAAC

C3L Arm

~~~~~  
4851 GTAAAGCACT TTGTAAAATT AGTTCTTTCT TTTTACTTC TAACATGTTT  
CATTTCTGTA AACATTTTAA TCAAGAAAGA AAAAATGAAG ATTGTACAAA

## C3L Arm

~~~~~  
4901 GCAAGTATAT TTTTAATAAC TGTAATAAGC GTATATAGAT ATGTAAAAAT
CGTTCATATA AAAATTATTG ACATTATTCG CATATATCTA TACATTTTAA

C3L Arm

~~~~~  
4951 TACCCTTCCT GGATTTACCT ATAAATATGT TAACATTAGA AATATGTACA  
ATGGGAAGGA CCTAAATGGA TATTTATACA ATTGTAATCT TTATACATGT

## C3L Arm

~~~~~  
5001 TTACTATATT TTTCATATGG ATTATTTCTA TTATACTAGG GATTCCTGCT
AATGATATAA AAAGTATACC TAATAAGAT AATATGATCC CTAAGGACGA

C3L Arm

~~~~~  
5051 CTTTACTTTA GAAATACTAT CGTAACAAAA AATAACGACA CGCTGTGTAT  
GAAATGAAAT CTTTATGATA GCATTGTTTT TTATTGCTGT GCGACACATA

## C3L Arm

~~~~~  
5101 TAATCATTAT CATGATAATA GAGAAATTGC TGAATTGATT TACAAAGTTA
ATTAGTAATA GTACTATTAT CTCTTAAACG ACTTAACTAA ATGTTTCAAT

C3L Arm

~~~~~  
5151 TTATCTGTAT CAGATTTATT TTAGGATACC TACTACCTAC GATAATTATA  
AATAGACATA GTCTAAATAA AATCCTATGG ATGATGGATG CTATTAATAT

## C3L Arm

~~~~~  
5201 CTCGTATGCT ATACGTTACT GATCTACAGA ACTAACAATG CATGTCGACG
GAGCATACGA TATGCAATGA CTAGATGTCT TGATTGTTAC GTACAGCTGC

C3L Arm

~~~~~  
5251 CGGCCGCAA  
GCCGGCGTT